# DUQUESNE LIGHT CO. Operations Services Engineering Services Protection Engineering

Date: November 25, 2008

CIRCUIT: Midland-Cooks Ferry Ckt. 22869

LOCATION: Route 168; Shippingport (P. #271187)

CO OPERATION NUMBER: SWR 974

CO FILE NUMBER:

#### VHF MODEM DEPLOYMENT

EQUIPMENT: G&W Type VIPER Recloser with SEL-351R Control

CONTROL CABINET SERIAL NUMBER: 2008269342

G & W VIPER SERIAL NUMBER: 650-07-0421

#### SETTINGS:

#### Group 1 Settings (NOTE: Set Group 2 Settings = Group 1 Settings)

Control Identifier	SWR 974
Circuit Identifier	T22869
CT Ratio	1000
PT Ratio	110
Phase Minimum Trip	400 A
Ground Minimum Trip	200 A
SEF Minimum Trip	OFF
Phase Fast Curve	101
Ground Fast Curve	101
Phase Delay Curve Phase Delay Curve – Time Dial Phase Delay Curve – EM Reset	132 N/A N
Ground Delay Curve Ground Delay Curve – Time Dial Ground Delay Curve – EM Reset	162 N/A N
SEF Time Delay	0
Phase Fast Curve – Operations Ground Fast Curve – Operations Phase – Operations to Lockout Ground – Operations to Lockout SEF – Operations to Lockout	OFF OFF 4 4 OFF

CO OPERATION NUMBER: SWR 974

EQUIPMENT: G&W Type VIPER Recloser with SEL-351R Control

CONTROL CABINET SERIAL NUMBER: 2008269342

G & W VIPER SERIAL NUMBER: 650-07-0421

#### SETUP: Communications

# Data Port 3 Settings

VHF Modem IP Address	10.211.1.1/2	100
Protocol	PROTO	DNPE
Baud Rate (300-38400)	SPEED	9600
DNP Address (0-65534)	DNPADR	1132
Minutes for Request Interval (0-32767)	TIMERQ	0
Currents Scaling Decimal Places (0-3)	DECPLA	1
Voltages Scaling Decimal Places (0-3)	DECPLV	1
Misc. Data Scaling Decimal Places (0-3)	DECPLM	1
Seconds to Select/Operate Timeout (0-30)	STIMEO	1.0
Datalink Retries (0-15)	DRETRY	0
Seconds to Datalink Timeout (0-5)	DTIMEO	1
Minimum Seconds from DCD to Tx (0-1)	MINDLY	0.1
Maximum Seconds from DCD to Tx (0-1)	MAXDLY	0.1
Settle Time from RTS On to Tx	PREDLY	OFF
Settle Time from Tx to RTS OFF (0-30)	PSTDLY	0.05
Enable Unsolicited Reporting	UNSOL	Y
Enable Unsolicited Reporting at Power Up	PUNSOL	Y
DNP Address to Report to (0-65534)	REPADR	1000
Number of Events to Tx On (1-200)	NUMEVE	1
Seconds Until Oldest Event to Tx On(0-60)	AGEEVE	1.0
Seconds to Event Message Confirm Timeout (1-50)	UTIMEO	20
Class for Analog Event Data (0-3)	CLASSA	2
Class for Binary Event Data (0-3)	CLASSB	2
Class for Counter Event Data (0-3)	CLASSC	2
Amps Reporting Deadband Counts (0-32767)	ANADBA	3300
Volts Reporting Deadband Counts (0-32767)	ANADBV	3300
Misc. Data Deadband Counts (0-32767)	ANADBM	3300

			UEST FOR			
Tadaula Data - 7/00/			mpleted by Request		Dh # 222 5	
Today's Date: 7/30/			lar Re	equestor's	Phone # <u>393-8</u>	3433
Station: SWR675 S						
Equipment Requested UPGRADE VHF RADIO					ONS OUTAGE T	<u>O</u>
		to, o maiaria o	conc., only one 2.			
Requested Date: 8/0	2/10 Cleared by	Time: 8:00	Outage Le	ngth: <u>1</u>	☐ Hours	□ Days
	М	ark an 'X' for	all that apply			
Outage will I	oe: ⊠ Continuous	s □ Excl	uding Weekends		Daily	
1 1	ned to service in:		_			
					·	
Email to OCFS@Du	qlight.com	Fax# 412-39	3-5732			
Steps Taken to Establ	ish Clearance:					
•			2			
7						
_			10			
Customer Affected	Representative	Time Called				
Remarks:						
<u>L</u>						
	PJM Notification	on and Approv	als if needed			
PJM Notified Date: Reason for Denial:	EDA	RT#	Denied:			
Final Approval:		By:				

# DUQUESNE LIGHT CO. Customer Operations

Asset Management & Engineering Protection Engineering

Date: July 27, 2005

#### RADIUS VHF MODEM TEST DEPLOYMENT

CIRCUIT: Midland-Cooks Ferry Ckt. 22869

LOCATION: Mill Street near Pine Street; Greene Twp. (P. #326304)

CO OPERATION NUMBER: SWR 675

CO FILE NUMBER:

Please make the following recloser settings:

EQUIPMENT: Type VWVE Recloser with SEL-351R Control CONTROL CABINET SERIAL NUMBER: 2004007169

**SETTINGS:** 

#### Group 1 Settings (NOTE: Set Group 2 Settings = Group 1 Settings)

Control Identifier Circuit Identifier	SWR 675 D22869
CT Ratio PT Ratio	1000 110
Phase Minimum Trip Ground Minimum Trip SEF Minimum Trip	400 A 200 A OFF
Phase Fast Curve Ground Fast Curve	101 101
Phase Delay Curve Phase Delay Curve – Time Dial Phase Delay Curve – EM Reset	132 N/A N
Ground Delay Curve – Time Dial Ground Delay Curve – EM Reset	162 N/A N
SEF Time Delay	0
Phase Fast Curve – Operations Ground Fast Curve – Operations Phase – Operations to Lockout Ground – Operations to Lockout SEF – Operations to Lockout	OFF OFF 4 4 OFF

CO OPERATION NUMBER: SWR 675

EQUIPMENT: Type VWVE Recloser with SEL-351R Control CONTROL CABINET SERIAL NUMBER: 2004007169

## **SETUP:** Communications

## Data Port 3 Settings

Protocol	DNPE
Baud Rate (300-38400)	9600
DNP Address (0-65534)	905
VHF Modem IP Address	166.158.66.62/2100
Minutes for Request Interval (0-32767)	0
Class for Analog Event Data (0-3)	2
Class for Binary Event Data (0-3)	2 2 2
Class for Counter Event Data (0-3)	2
Currents Scaling Decimal Places (0-3)	1
Voltages Scaling Decimal Places (0-3)	1
Misc. Data Scaling Decimal Places (0-3)	1
Seconds to Select/Operate Timeout (0-30)	1.0
Datalink Retries (0-15)	0
Seconds to Datalink Timeout (0-5)	1
Minimum Seconds from DCD to Tx (0-1)	0.1
Maximum Seconds from DCD to Tx (0-1)	0.1
Settle Time from RTS On to Tx	OFF
Settle Time from Tx to RTS OFF (0-30)	0.05
Amps Reporting Deadband Counts (0-32767)	100
Volts Reporting Deadband Counts (0-32767)	100
Misc. Data Deadband Counts (0-32767)	100
Enable Unsolicited Reporting	Y
Enable Unsolicited Reporting at Power Up	Y
DNP Address to Report to (0-65534)	1000
Number of Events to Tx On (1-200)	1
Seconds Until Oldest Event to Tx On(0-60)	1.0
Seconds to Event Message Confirm Timeout (1-50)	2

	OUT	AGE REQ	UEST FORM	/1		
	Items in t	his Box to be Cor	npleted by Requesto	or		ļ
Today's Date: 7/30	0/10 Requested B	y: Lee W. Pil	lar Re	questor's Pl	none # _ 393-8433	
	SHIPPINGPORT TO					
Equipment Requeste	ed and Work to Be P	erformed: R	EQUEST A COM	MUNICATION	NS OUTAGE TO	
UPGRADE VHF RAD	UPGRADE VHF RADIO NETWORK, SWN677 Midland-Cooks Ferry T22869					
Requested Date: _8	/02/10 Cleared by	Time: 8:00	Outage Ler	ngth: _1	☐ Hours 🛭 Day	ys
	M	ark an 'X' for	all that apply			
Outage wil	l be: ⊠ Continuous	☐ Excl	uding Weekends	□D	aily	
Can be ret	urned to service in:	□ 1 Hr.	☐ 4 Hrs. ☐ 8	Hrs. ⊠Wł	nen completed	
D III CODOCO	3.14	7U 410 00	2 5720			
Email to OCFS@D	uqlight.com	fax# 412-39	3-5732			
Steps Taken to Esta	blish Clearance:					
1			2			
3	·					
5	5					
7						
9			10			
Customer Affected	Representative	Time Called	Time Approved		Remarks	
Domarko:						
Remarks:						
PJM Notification and Approvals if needed						
PJM Notified Date:		RT#				
Reason for Denial:						
Final Approval:		Ву:				

# DUQUESNE LIGHT COMPANY CUSTOMER OPERATIONS

### Asset Management & Engineering Protection Engineering

Date: May 2, 2002

CIRCUIT: Midland-Cooks Ferry T22869 LOCATION: Pine Street (Route 168) near M CO OPERATION NUMBER: <u>SWN 677</u> CO FILE NUMBER:	ill Street; Hookstown
Mr. R. W. Popielski:	
Please make the following sectionalizer settings:	
EQUIPMENT: Type GWC Motor Operated S SERIAL NUMBER: GWC CONT	Sectionalizer ROL CABINETASC200506005799
SETTINGS:	
Phase Minimum Actuating Current Inrush Restraint Multiplier Inrush Restraint Time Ground	- N/A. - N/A - N/A
Minimum Actuating Current Inrush Restraint Multiplier Inrush Restraint Time	- N/A - N/A - N/A
Counts to Lockout Memory Time Reset Time (No Verification Required) TD-1 (No Verification of Setting Required)	- N/A - N/A - N/A - N/A
Remote Terminal Unit  Location of Controlling Remote Remote Terminal Language Control Point #1 Control Point #2 Control Point #3 Remote Terminal Address CO Channel Number	
REASONS:	
1. All automatic operation features on this device	e shall be disabled.
. 2. This device will function as a motor operated	switch.
Settings made by: D.Baylor	Date:11-09-05
Settings verified by:	Date:
cc: File	K. E. McGill  RAS
	Protection Engineer

OUTAGE REQUEST FORM  Items in this Box to be Completed by Requestor					
Today's Date: 7/30/10	Requested By: Lee W	. Pillar Req	— uestor's Pho	one # 393-8433	
	PINGPORT TOWER				
Equipment Requested an		REQUEST A COMM	UNICATIONS	OUTAGE TO	
UPGRADE VHF RADIO NE					ry
Requested Date: 8/02/10	Cleared by Time: 8	:00 Outage Lenç	gth: <u>1</u>	☐ Hours 🛛 D	ays
	Mark an 'X'	for all that apply			
Outage will be:	⊠ Continuous ☐ E	Excluding Weekends	☐ Dai	ly	
Can be returned	I to service in:  1 Hr.	☐ 4 Hrs. ☐ 8 H	⊣rs. ⊠Whe	n completed	
Email to OCFS@Duglig	ght.com Fax# 412	-393-5732			
					<del></del>
Steps Taken to Establish	Clearance:				
•		2			
					•
					_
0		40			_
Customer Affected Re	presentative Time Call	ed Time Approved		Remarks	
Remarks:					
					· · · · · · · · · · · · · · · · · · ·
PJM Notification and Approvals if needed					
PJM Notified Date: Reason for Denial:	EDART#	Denied:			
Final Approval:	Ву:				

DUQUESNE LIGHT CO.
Operations Services
Engineering Services
Protection Engineering

Date: August 18, 2008

CIRCUIT: N.O. Tie between Traverse Run D23770 & Midland-Cooks Ferry D22869

LOCATION: Route 151 off Route 18; Raccoon (P. #125711)

CO OPERATION NUMBER: WA 607

CO FILE NUMBER:

#### VHF MODEM DEPLOYMENT

EQUIPMENT: Energyline Model 5801G control box for GWC switch CONTROL CABINET SERIAL NUMBER: 5801-0180-001008

#### SETTINGS:

#### SETUP: Fault Detection

Phase Fault Detection Current Level	280 amps.
Ground Fault Detection Current Level	140 amps.
Phase Fault Duration Time Threshold	50 msec.
Ground Fault Duration Time Threshold	50 msec.
Phase Current Inrush Restraint Time	250 msec.
Ground Current Inrush Restraint Time	400 msec.
Phase Current Inrush Restraint Multiplier	4X
Ground Current Inrush Restraint Multiplier	4X

#### SETUP: Automatic Operation

Features Enabled	Sectionalizing Only
Memory Time from 1st Recloser Operation to Reset	90 sec.
Successful Reclose Reset Time	N/A
Overcurrent to Volt Loss Association Time (Tenths)	6
Fault Current Required Before First/All Voltage Loss(cs)	All
Number of Recloser Counts to Sectionalizer Trip	1
Number of Shots Required for Lockout	One
Shots to Lockout Time Threshold	20 sec.

#### SETUP: Communications

Communications RTU Address	1116
Application Layer Confirmations	Enabled
Number of Confirmation Attempts	3
Time Delay Between Attempts	10 sec.
Unsolicited Responses to Master Station	Enabled – V2
Time Delay Between Restart Messages	60 sec.
Master Station RTU Address	1000
Device Restart Message Transmit Delay	10 sec.

Overcurrent Required Before Shots to Lockout Operation Enabled

OUTAGE REQUEST FORM				
Items in this Box to be Completed by Requestor				
Today's Date: 7/30/10 Requested By: Lee W. Pillar Requestor's	Phone # _393-8433			
Station: SWA588 SHIPPINGPORT TOWER				
Equipment Requested and Work to Be Performed: REQUEST A COMMUNICATIONS OUTAGE TO UPGRADE VHF RADIO NETWORK, SWA 588 N.O. Tie between Midland-Cooks Ferry T22869 & Midland-Hookstown T22870				
Requested Date: 8/02/10 Cleared by Time: 8:00 Outage Length: 1	☐ Hours 🛭 Days			
Mark an 'X' for all that apply				
Outage will be: ⊠ Continuous ☐ Excluding Weekends ☐	Daily			
Can be returned to service in: ☐ 1 Hr. ☐ 4 Hrs. ☐ 8 Hrs. ☒ V	Vhen completed			
<u> </u>				
Email to OCFS@Duglight.com Fax# 412 393 5732				
Steps Taken to Establish Clearance:  1 2 3				
5 6 7 8				
9 10				
Customer Affected Representative Time Called Time Approved	Remarks			
Remarks:				
PJM Notification and Approvals if needed				
PJM Notified Date: EDART # Denied:				
Final Approval: By:				

# DUQUESNE LIGHT CO. Customer Operations Work Management Protection Engineering

Date: November 10, 2005

CIRCUIT: N.O. Tie between Midland-Cooks Ferry T22869 & Midland-Hookstown T22870

LOCATION: Georgetown Road near Hookstown SS; Greene Twp.

CO OPERATION NUMBER: SWA 588

CO FILE NUMBER:

#### RADIUS VHF MODEM TEST DEPLOYMENT

EQUIPMENT: Energyline Model 5801S control box for SCADAMATE switch

SCADAMATE SWITCH SERIAL NUMBER: 08-20385

CONTROL CABINET SERIAL NUMBER: ASC200010002402 replaced 3-10 w/ 5801-0041-001081

#### SETTINGS:

#### SETUP: Fault Detection

Phase Fault Detection Current Level	220 amps.
Ground Fault Detection Current Level	160 amps.
Phase Fault Duration Time Threshold	50 msec.
Ground Fault Duration Time Threshold	50 msec.
Phase Current Inrush Restraint Time	250 msec.
Ground Current Inrush Restraint Time	400 msec.
Phase Current Inrush Restraint Multiplier	4X
Ground Current Inrush Restraint Multiplier	4X

#### SETUP: Automatic Operation

Features Enabled	Sectionalizing Only
i carares Enabled	occionantine on ,

Memory Time From 1st Recloser Operation to Reset				
Successful Reclose Reset Time	N/A			
Overcurrent to Volt Loss Association Time (Tenths)	6			
Fault Current Required before First/All Voltage Loss(es)	All			
Number of Recloser Counts to Sectionalizer Trip	2			
Number of Shots Required for Lockout	One			
Shots to Lockout Time Threshold	20 sec			
Overcurrent Required Before Shots to Lockout Operation	Enabled			

#### SETUP: Communications

Communications RTU Address	113
Application Layer Confirmations	Enabled
Number of Confirmation Attempts	3
Time Delay Between Attempts	10 sec.
Time Delay Between Restart Messages	б0 sec.
Unsolicited Responses to Master Station	Enabled-V2
Master Station RTU Address	1000

Device Restart Message Transmit Delay 10 sec.

DLC000093 (SWA588VHF'SS-ADSS)

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OUTAGE REQUEST FORM	OUTAGE REQUEST FORM					
Items in this Box to be Completed by Requestor						
Today's Date: 7/30/10 Requested By: Lee W. Pillar Requestor's Phone # 393-8433						
Station: WR 875 SHIPPINGPORT TOWER						
Equipment Requested and Work to Be Performed: REQUEST A COMMUNICATIONS OUTAGE TO						
UPGRADE VHF RADIO NETWORK, WR 875 Midland-Cooks Ferry Ckt. D22869						
Requested Date: 8/02/10 Cleared by Time: 8:00 Outage Length: 1 ☐ Hours 🗵 Da	ys					
Mark an 'X' for all that apply						
Outage will be: ⊠ Continuous ☐ Excluding Weekends ☐ Daily						
Can be returned to service in: ☐ 1 Hr. ☐ 4 Hrs. ☐ 8 Hrs. ☒ When completed						
Email to OCFS@Duqlight.com Fax# 412-393-5732						
Steps Taken to Establish Clearance:  1 2						
3 4	3 4					
56						
7 8						
9 10						
Customer Affected Representative Time Called Time Approved Remarks						
	····					
Remarks:						
PJM Notification and Approvals if needed						
PJM Notified Date: EDART # Denied: Denied:	····					
Final Approval: By:						

# DUQUESNE LIGHT CO. Customer Operations Asset Management & Engineering Protection Engineering

Date: June 1, 2005

CIRCUIT: Midland-Cooks Ferry Ckt. D22869

LOCATION: Route 168 just south of Hardins Run Road; Hanover Twp.

CO OPERATION NUMBER: WR 875

CO FILE NUMBER:

Please make the following recloser settings:

EQUIPMENT: G&W Type VIPER Recloser with SEL-351R Control CONTROL CABINET SERIAL NUMBER: 2005095138

SETTINGS:

#### Group 1 Settings (NOTE: Set Group 2 Settings = Group 1 Settings)

Control Identifier Circuit Identifier	WR 875 D22869
CT Ratio	1000
PT Ratio	110
Phase Minimum Trip	320 A
Ground Minimum Trip	160 A
SEF Minimum Trip	OFF
Phase Fast Curve	101
Ground Fast Curve	101
Phase Delay Curve	132
Phase Delay Curve – Time Dial	N/A
Phase Delay Curve – EM Reset	N
Ground Delay Curve Ground Delay Curve – Time Dial Ground Delay Curve – EM Reset	162 N/A N
SEF Time Delay	0
Phase Fast Curve – Operations Ground Fast Curve – Operations Phase – Operations to Lockout Ground – Operations to Lockout SEF – Operations to Lockout	OFF OFF 4 4 OFF

CO OPERATION NUMBER: WR 875

EQUIPMENT: G&W Type VIPER Recloser with SEL-351R Control CONTROL CABINET SERIAL NUMBER: 2005095138

#### **SETUP:** Communications

RS 232 Data Port Address (Port 2)

### Data Port 3 Settings

Protocol Baud Rate (300-38400) DNP Address (0-65534)	DNPE 9600 888
Raven CDMA Modem IP Address	166.139.36.145/2100
Minutes for Request Interval (0-32767) Class for Analog Event Data (0-3) Class for Binary Event Data (0-3) Class for Counter Event Data (0-3) Currents Scaling Decimal Places (0-3) Voltages Scaling Decimal Places (0-3) Misc. Data Scaling Decimal Places (0-3) Seconds to Select/Operate Timeout (0-30) Datalink Retries (0-15) Seconds to Datalink Timeout (0-5) Minimum Seconds from DCD to Tx (0-1) Maximum Seconds from DCD to Tx (0-1) Settle Time from RTS On to Tx Settle Time from Tx to RTS OFF (0-30) Amps Reporting Deadband Counts (0-32767) Volts Reporting Deadband Counts (0-32767) Enable Unsolicited Reporting Enable Unsolicited Reporting at Power Up DNP Address to Report to (0-65534) Number of Events to Tx On (1-200)	0 2 2 2 1 1 1 1.0 0 1 0.1 0.1 0.1 0.5 3300 3300 3300 Y Y Y 1000 1
Seconds Until Oldest Event to Tx On(0-60)	1.0

Seconds to Event Message Confirm Timeout (1-50) 2

4-6-10 Pelifasé Fat 315

# VHF 220Mhz Project

# HOPEWELL TOWER

### SCOPE OF WORK

Contractor is to climb tower using and adhering to all safety standards while work is preformed!

- Climb tower and change existing VHF antenna with 220Mhz spectrum
   Antenna.
- Sweep antenna and make sure it's within operating frequency.
- Supply Duquesne Light with a hard copy of Sweep.
- Duquesne Light Telecom Techs are to assist Contractor.
- Duquesne Light Telecom Techs are also to sweep Antenna and Supply the engineer with a hard copy of their sweep.
- Duquesne Light Telecom Techs are to install new 220Mhz Radio, making all power, antenna and fiber connections.
- Duquesne Light Telecom Techs are to bring old VHF base radio to Woods Run.

Lee W. Pillar

Communications Engineer/ supervisor



2801 Liberty Avenue Pittsburgh, PA 15222 (412) 391-0588

Thomas M. Novosel 412-394-7637 Direct Dial

February 25,2010

Via Email: (LPillar@Duqlight.Com)

Mr. Lee Pillar Duquesne Light Company 2101 Beaver Ave. Pittsburgh,Pa. 15233

Subject: Hopewell Substation

Dear Lee:

Per your request to perform the work at the above referenced site we are pleased to submit a price of \$ 3,875.00

If you have any questions, please call me at 412-394-7637.

Regards,

Thomas M. Novosel

Wireless Program Manager

TMN: 02/25/10

PO Date

PO No.

Rev.

Page

28-FEB-10 4296-315

0 2 of 2

BLANKET RELEASE

SARGENT ELECTRIC CO.

Item Number / Promised Line Description Date

Date Qty UOM

Unit Price

Extended Price

Equipment Allowance Rates as per Vendor's proposal.

This Purchase Agreement shall be solely governed by the attached DLCo General Terms and Conditions Construction Services. All pre-printed terms and conditions contained on the reverse side of this Purchase Order shall not apply. Contractor's acknowledgment, commencement of performance, or any other conduct by Contractor indicating that this Purchase Agreement is in effect, shall constitute acceptance, by Contractor, of the above referenced terms and conditions, without exception. All additional or different terms provided by Contractor at anytime, including, but not limited to Contractor's proposal, acknowledgment, invoice or shipping papers is expressly rejected and shall not apply, without prior agreement and specifically incorporated by Company into this Purchase Agreement.

ANY PRODUCTS OR SERVICES PROVIDED UNDER ANY RESULTING PURCHASE AGREEMENT MAY BE SUBJECT TO SPECIFIC REQUIREMENTS RELATING TO THE YEAR 2000. PLEASE REFER TO THE ENCLOSED SUPPLEMENTAL TERMS AND CONDITIONS AND/OR THE ENCLOSED SPECIFICATION FOR ADDITIONAL DETAILS REGARDING THEIR REQUIREMENTS.

o SHIP TO: 06-APR-10

3,875.0000

Address at top of page Lee Pillar, N2-DOC, x8433

Sargent Electric Co. to perform work at Hopewell SS as scoped by Lee Pillar and as quoted to Lee Pillar, February 25, 2010.

\$3,875.00

549.59.3971000.S.2118

Total:

3,875.00

Duquesne Light

Our Energy...Your Power=

**BLANKET RELEASE** 

**Duquesne Light Company** Material Services / Purchasing NM-MS 2515 Preble Avenue Pittsburgh, PA 15233-1009

PO Date

PO No.

Rev.

Page

404296-315 0 1 of 2

Ship To:

See Below

28-FEB-10

Test Purchase Order

Supplier Address:

SARGENT ELECTRIC CO. 2801 LIBERTY AVENUE PITTSBURGE, PA 15222-4794 Send Invoices in Duplicate to:

Duquesne Light Company Accounts Payable Dept. 7-6 411 7th Avenue, PO Box 1920 Pittsburgh, PA 15230-1920

Payment Terms

NET 30

Carrier

FOB

Buyer GARLICKI, PAUL R

Destination/FA

Phone 4123938428

Fax

Effective From:

To:

Item Number / Promised Line Description Date

Qty UOM

Unit Price

Extended

Price

. Acknowledgment -

Perform blanket Electrical Construction services as follows:

Furnish supervision, labor, tools, material and equipment to perform work including, but not limited to, erection of towers and poles for transmission/distribution lines, installation of static wires and associated equipment during the period January 24, 2000 through June 30, 2001 as requested by Richard J. Sikora, Manager of Major Projects.

Firm Compensation Rates in conjunction with Article I, of Exhibit B of Electrical Construction Specifications issued under RFQ 201591 are as follows:

Overhead @ 6.0% of Direct Straight Time Job Labor 7.0% of Direct Straight Time Job Labor Small tools, etc @ 0.5% of Direct Straight Time Job Labor

Total of above 13.5 % of Direct Straight Time Job Labor Taxes & Insurance @ 24.0% of Direct Straight Time Line Worker Total Labor Burden @ 37.5% Handling of Mat'l & Equipment .@ 5.0% Handling of Subcontracting @ 5.0%

Total:

Continued

OUTAGE REQUEST FORM					
Items in this Box to be Completed by Requestor					
Today's Date: 6/22/10 Requested By: Lee W. Pillar Requestor's Phone # 393-8433					
Station: WR 716 HOPEWELL TOWER					
Equipment Requested and Work to Be Performed: REQUEST A COMMUNICATIONS OUTAGE TO					
UPGRADE VHF RADIO NETWORK , WR 716 D23662					
Requested Date: 6/23/10 Cleared by Time: 8:00 Outage Length: 1 ☐ Hours 🗵 Date	/s				
Mark an 'X' for all that apply					
Outage will be: ⊠ Continuous ☐ Excluding Weekends ☐ Daily					
Can be returned to service in: ☐ 1 Hr. ☐ 4 Hrs. ☐ 8 Hrs. ☒ When completed					
Email to QCFS \ Duclight com Fax# 412-393-5732					
Steps Taken to Establish Clearance:					
12					
3					
56					
78					
9 10					
Customer Affected Representative Time Called Time Approved Remarks					
Remarks:					
PJM Notification and Approvals if needed					
PJM Notified Date: EDART # Denied: Reason for Denial:					
Final Approval: By:					

OUTAGE REQUEST FORM					
Items in this Box to be Completed by Requestor					
Today's Date: 6/22/10 Requested By: Lee W. Pillar Requestor's Phone # 393-8433					
Station: SWA558 HOPEWELL TOWER					
	: REQUEST A COMMUNICATIONS OUTAGE TO				
UPGRADE VHF RADIO NETWORK , SWA558 N.O.	TIE BETWEEN D23662 & 22832				
Requested Date: 6/23/10 Cleared by Time:	8:00 Outage Length: 1 ☐ Hours ☑ Days				
Mark an 'X	(' for all that apply				
Outage will be: 🛛 Continuous	Excluding Weekends				
Can be returned to service in: 1 H	r. ☐ 4 Hrs. ☐ 8 Hrs. ☒ When completed				
Email to OCFS / Duglishee::: Fax# 41:	2-393-5732				
and the second and th					
Steps Taken to Establish Clearance:					
1	2				
3	4				
5					
7					
9	10				
Customer Affected Representative Time Ca	alled Time Approved Remarks				
Remarks:					
PJM Notification and A	oprovals if needed				
PJM Notified Date: EDART#	Denied:				
Reason for Denial: Final Approval:  By:					

OUTAGE REQUEST FORM						
Items in this Box to be Completed by Requestor						
Today's Date:6/22/10 _ Requested By: _Lee W. Pillar Requestor's Phone # 393-8433	Today's Date: 6/22/10 Requested By: Lee W. Pillar Requestor's Phone # 393-8433					
Station: WA959 HOPEWELL TOWER						
Equipment Requested and Work to Be Performed: REQUEST A COMMUNICATIONS OUTAGE TO						
UPGRADE VHF RADIO NETWORK , WA959 CIRCUIT D23622						
Requested Date: 6/23/10 Cleared by Time: 8:00 Outage Length: 1 ☐ Hours ☑ Da	/s_					
Mark an 'X' for all that apply						
Outage will be: ⊠ Continuous ☐ Excluding Weekends ☐ Daily						
Can be returned to service in: ☐ 1 Hr. ☐ 4 Hrs. ☐ 8 Hrs. ☒ When completed						
Email to OCFSC Duckisht com Fax# 412-393-5732	نسورس الروي					
Steps Taken to Establish Clearance:						
1 2						
3 4						
56						
7 8						
9 10						
Customer Affected Representative Time Called Time Approved Remarks						
	<del></del>					
Remarks:						
Remains.						
D IM Notification and Approvals if wooded						
PJM Notification and Approvals if needed  PJM Notified Date: EDART # Denied:						
Reason for Denial:						
Final Approval: Rv.						

OUTAGE REQUEST FORM						
Items in this Box to be Completed by Requestor						
Today's Date: 6/22/10 Requested By: Lee W. Pillar Requestor's Phone # 393-8433						
Station: WA532 HOPEWELL TOWER						
Equipment Requested and Work to Be Performed: REQUEST A COMMUNICATIONS OUTAGE TO						
UPGRADE VHF RADIO NETWORK, WA532 N.O. TIE BETWEEN D23645 & D23646						
Requested Date: 6/23/10 Cleared by Time: 8:00 Outage Length: 1						
Mark an 'X' for all that apply						
Outage will be:  Continuous  Excluding Weekends  Daily						
Can be returned to service in: ☐ 1 Hr. ☐ 4 Hrs. ☐ 8 Hrs. ☒ When completed						
Email to OCFS. Duelignation: Fax# 412-393-5732						
Steps Taken to Establish Clearance:						
1 2						
3 4						
56						
7 8						
9 10						
Customer Affected Representative Time Called Time Approved Remarks						
Remarks:						
PJM Notification and Approvals if needed						
PJM Notified Date: EDART # Denied:						
Reason for Denial:  Final Approval:  By:						

	OUTA	GE REC	UEST F	ORM		The second secon	
	Items in this	s Eex to be Co	mpleted by R	equestor			
Today's Date: 6/22/10	Requested By:	Lee W. Pi	llar	Request	tor's Pho	ne# <u>393-84</u>	133
Station: WA989 HOP	EWELL TOWER						
Equipment Requested a				COMMUNIC	CATIONS	OUTAGE TO	)
UPGRADE VHF RADIO	UPGRADE VHF RADIO NETWORK , WA989 CIRCUIT D23621						
Requested Date: 6/23/	10 Cleared by T	ime: 8:00	Outa	ge Length:	1	□Hours	⊠ Days
	Mar	k an 'X' for	all that ap	ply			
Outage will be	: 🛛 Continuous	☐ Exc	luding Week	cends	□ Dai	ly	
Can be return	ed to service in:	□ 1 Hr.	☐ 4 Hrs.	☐ 8 Hrs.	⊠ Whe	n completed	
Email to <u>UCFSIDus</u>	<u>litht.com</u> Fa	ax# 412-39	3-5732				<del></del>
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Steps Taken to Establis	h Clearance:						
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7			8				<del></del>
9			10				
Customer Affected - F	Representative	Time Called	Time Appi	roved	<b>的心模型</b>	Remarks	
					······································		
					**************************************		
Remarks:			<u> </u>				
	PJM Notification	and Appro	vals if need	led			
PJM Notified Date:	EDAR		Denie				
Reason for Denial:		Bv:					

# 219.2125 MHZ

# **Hopewell Tower**

# VIPER RADIO REMOTE IP NETWORK

Base IP 10.211.1.11/22 RF IP 10.211.70.1/24

Controller 10.211.1. 1

255.255.252.0

255.255.255.0

255.255.252.0

Base Default G/W 10.211.0.1

D3:46:1

Either IP	NET MASK	RadioMesh	NET MASK	RF MAC	Default G/W	Device	Number	
10.211.71.1/29	255.255.255.248	10.211.70.2/24	255.255.255.0	D3:46:2	10.211.70.1	SWA558	558	
					Longvue Ave & Maratta RD.,Hopi			
10.211.71.9/29	255.255.255.248	10.211,70.3/24	255.255.255 0	D3:46:3	10.211.70.1	WA989	989	
,					BeaverValley Mall(north end), Center TWP			
10.011.71.17/20	,						0.54	
10.211.71.17/29	255,255.255.248	10.211.70.4/24	255.255.255,0	D3:46.4	10.211.70.1	SWA954	954	
					Chapel Rd, near Impe	enai Drive, n	opeweit twr.	
10.211.71,25/29	255.255.255.248	10.211.70.5/24	255.255.255.0	D3:46:5	10.211.70,1	WA532	532	
					RT.989 north of Free	dom-Crider l	RD.,New Sewickley TWP	
10.211.71.33/29	255.255.255,248	10 211 70 6/24	255 255 255 0	D2.46.6	10 211 70 1	14/AOEO	959	
10.211.71.33/29	233.233.233,246	10.211.70.6/24	255.255.255 0	D3:46:6	10.211.70.1 Maratta Rd. near Upl	WA959		
					waratta na. near opi	ana, Anquip	μ	
10.211.71.41/29	255.255.255.248	10.211.70.7/24	255.255.255.0	D3:46:7	10.211.70.1	WR716	716	
					Maratta Rd. south of	Wade, Aliqu	ippa	
10.211.71.49/29	255 255 255 240	10 214 70 0/24	200 200 200 0	D2.40.0	40 34 1 70 4			
10.211./1.45/25	255.255.255.248	10.211.70 8/24	255,255,255.0	D3:46:8	10.211.70.1			
10.211.71.57/29	255.255.255.248	10.211.70.9/24	255.255.255.0	D3:46:9	10.211.70 1			

REALEASE 3/2

# VHF 220Mhz Project

## WILMERDING TOWER

## **SCOPE OF WORK**

Contractor is to climb tower using and adhering to all safety standards while work is preformed!

- Install and secure 1 5/8 helliflex cable going from substation up tower.
- Install N type connectors on both ends of cable.
- Install and secure 220Mhz antenna.
- Install and secure jumper from antenna to helliflex.
- Sweep antenna and make sure it's within operating frequency.
- Supply Duquesne Light with a hard copy of Sweep.
- Duquesne Light Telecom Techs are to assist Contractor.
- Duquesne Light Telecom Techs are also to sweep Antenna and Supply the engineer with a hard copy of their sweep.
- Duquesne Light Telecom Techs are to install new 220Mhz Radio, making all power, antenna and fiber connections.
- Duquesne Light Telecom Techs are to bring old VHF base radio to Woods Run.

Lee W. Pillar

Communications Engineer/ supervisor